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AUTHOR Snelbecker, Glenn E.
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ABSTRACT

Some reflections are made on the historical context of instructional theory, and comments are presented on some papers from a session of the American Educational Research Association's 1998 annual meeting. A number of current innovations in instructional theory can actually be found among topics that have been discussed at various times in the 20th century and earlier. With the proliferation of instructional theories at present, it may be useful to ask of each what value it adds to research and practice. Some ideas inspired by the following papers are explored: (1) "From Brain Research to Application" (Susan J. Kovalik and Jane R. McGrehan); (2) "Open Learning Environments: Foundations, Methods, and Models" (Michael Hannafin, Susan Land, and Kevin Oliver); (3) "Landamatics Instructional Design Theory and Methodology for Teaching General Methods of Thinking" (Lev N. Landa); and (4) "Recapturing Education's Full Mission: Educating for Social, Ethical, and Intellectual Development" (Catherine Lewis, Marilyn Watson, and Eric Schaps). (SLD)

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Historical Context and Future Development of Instructional Theories
Comments Regarding Four Instructional Theories

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Glenn E. Snelbecker, Ph.D.
Temple University

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Session #3: Historical Context and Future Development of Instructional Theory. Comments Regarding Four Instructional Theories

(Theory papers, respectively, by Susan J. Kovalik & Jane R. McGeehan; Michael Hannafin, Susan Land, & Kevin Oliver; Lev N. Landa; Catherine Lewis, Marilyn Watson, & Eric Schaps)

Glenn E. Snelbecker, Ph.D., Temple University

Paper presented at the American Educational Research Association Meeting in San Diego, CA, April, 1998

Note: Following are materials prepared for this paper. Some of the information about the respective theory papers was available prior to the session, while other observations and comments were written while the respective authors presented their theory papers.

I'll first repeat a few statements that I made at the first of these three sessions: This is an impressive array of contemporary instructional theories and models. Collectively they illustrate both common features and diverse views prevalent today concerning instructional theory and the potential practical application of our evolving knowledge about designing instruction. They also reflect trends of a more general nature (i.e., beyond instructional theory) discussed today both in education and training contexts. The respective authors should be commended for this collaborative project, despite the fact that time working "across theories" necessarily takes some time away from development and study of their own respective theories and models. But this collaborative effort, and others which need to follow, is necessary if we are to both advance our understanding about instruction and to find ways whereby the resultant theories and models can help guide practice in education and learning contexts.

Now that we are now coming closer to the turn of the century and to a "new millennium," it seems appropriate to think about the kinds of instructional theories that may be needed for the decades ahead. But while exploring prospects for the future, it also seems prudent to examine patterns and changes regarding both current and past developments in instructional theory.

In the course of these explorations and reminiscences, it is interesting to observe that a number of "current innovations" actually can be found among the topics that have been discussed and debated at various times during the 20th century and even earlier. Some examples that come to mind include (but are not limited to) the following:

- **Especially "re-integrate" "mind" and "soul" in instructional theory – Note the little "dittty" about psychology losing its "soul" at the turn of the century, and losing its mind with the advent of Behavioral Psychology's influence during the 1930's to 1950's or 1960's.**

- Also comment regarding the contemporary "return" to "qualitative assessment, and to "apprenticeship" types of instruction ... after "leaving them behind" (to a great extent) around the turn of the century and up to the 1920's.
- Literature regarding pros and cons for using blackboards and other innovations of the various periods historically are similar in many respects to contemporary debates about using computers and other technology resources. Build on Session #2 comments ref technology and reiterate questions/ issues/ opportunities afforded/"obligated" with technology resources .. if we "exploit" them to their full potential.
- Also consider changes between Volume 1 and Volume 2, as well as the nature of instructional theories discussed in Learning Theory, Instructional Theory and Psychoeducational Design (Snelbecker, 1974/1985) as basis for conjecturing about current status and prospects for the future. For example note the growing focus on instruction and instructional theory as a primary topic of interest, in contrast with numerous earlier patterns placing instructional theory as mainly a by-product of research and theory on various other topics.
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We also should carefully re-examine what it is that we expect from instructional theories – or, frankly, what we expect from any kind of theories. Do we really expect that any given theory will address all aspects of problems or theoretical topics? To what extent might it be beneficial for knowledge producers and knowledge users to have more realistic expectations about instructional theories. An interesting advertising theme and campaign may have some useful ideas for us to consider.

Advantages of "Added Value": Why Claim That We're "Only" Doing Certain Aspects Instead of "The Whole Thing"?

> "We don't make a lot of the products you buy. We make a lot of the products you buy better."™ (Trademark of BASF Corporation).

Since early in my own graduate student years I've been emphasizing this idea: "A slave to a theory is a slave, no matter how good the theory might be." Nonetheless, many people with whom I have discussed theories -- whether budding knowledge producers or aspiring knowledge users, graduate or undergraduate students, or even experienced professionals -- seem to develop a preference for some particular theory and to have problems in seeing how they may use more than one theory in a given context, no matter whether it involves a research or practical situation. This very strong commitment to some theory (people differ in the particular theory they choose) often leads to a call to get rid of, or at least dis-enfranchise, any and all competitor theories.

Several years ago while trying to "solve" this puzzle, I kept noticing a series of advertisements that had a common theme. "We don't make a lot of the products you buy. We make a lot of the products you buy better."™ (Trademark of BASF Corporation). Some of their advertisements were: "At BASF we don't make the skates, we make them

smoother"™ "We don't make the helmet, we make it more comfortable."™ Out of curiosity, I first asked students if they had seen or heard these advertisements. When I learned that many of my students had seen them, I asked what was meant by these commercials, and how might they be relevant for our ongoing discussions of theories and their use. After successfully using this theme to help students think more clearly about what theories do and do not address, I contacted BASF. Through Mr. Terrence M. Cooper (personal communication, December 12, 1996) I received permission to cite their themes here; I also received a paper in which Mr. Helmuth von Moltke (1993) provided more background information about the evolution of this advertising theme and its effectiveness that made me even more intrigued with prospects that a parallel approach could be useful in describing the scope and limitations of instructional design research findings and theories.

Perhaps we <u>can</u> learn something from this advertising theme. Perhaps what we need to do in describing theories and research reports is to identify the "added value" that the respective theory or research results provide us. We need not claim that we have "all the answers" for a theoretical issue or a practical matter; we properly can claim "credit" for having addressed at least some aspects of those matters.

As I've already noted above, in principle, such details already are expected for theories and research results. Perhaps it's just that in our enthusiasm in talking about what has been learned that we sometimes temporarily "forget" the restrictions of our preferred theories or research findings. This "open, candid" kind of approach that recognizes contributions that improve <u>some</u> aspect of instruction, instead of pretending that "<u>everything must</u> be changed," can be mutually beneficial for knowledge producers as well as for knowledge users. It can help clarify what theorists and researchers are <u>selecting</u> to do without presenting pressures for them to "do more." It can help instructors and other practitioners to know what aspects of a given practical situation have been addressed and which have been intentionally or unintentionally excluded.

Perhaps this collaborative venture – i.e., these three AERA Meeting sessions, as well as the book in which these respective theories and models will be presented – may help us to clarify both what we now know about instruction and what ideas and modifications in our approaches may be helpful in future theory construction and application.

As I have done in the previous two sessions, now I will briefly identify (a) some <u>ideas</u> that I gained from the respective theories, and (b) some <u>issues</u> detected while reading a particular theory but which are relevant for instructional theories more generally.

Presentation #1, Session #3

Chapter 17 Susan J. Kovalik & Jane R. McGeehan, ITI: From Brain Research To Application (Integrated Thematic Instruction (ITI): From Brain Research to Application

<u>"Ideas":</u>

- **Interesting synthesis of brain-behavior relationships and technological innovations that are bringing the world "closer together," and thus providing a potential foundation for changes in instruction, as well as education more generally.**
- **"Integrated Thematic Instruction (ITI)" is proposed as a model <u>for curriculum and instruction</u>, and "responsible citizenship" is offered as an important ingredient of education.**
- **A major conceptual foundation for ITI is identified as the "biology of the brain," from which "six powerful concepts I call the 'Brain Basics'" are identified.**
- **The authors provide "eight brain-compatible elements of instruction ... to guide practice" (page 9) that probably would be helpful for researchers and other theorists to consider.**
- **It is noteworthy that the authors address "two levels of documenting mastery" regarding the ITI model – the teacher's mastery of the ITI model, and the students' mastery of the curriculum.**
- **Another matter worth noting here is the explicit manner in which these authors attempt to show how their theory has been evolving as they learn from their experiences (and the experiences of others) in applying their theory.**

<u>"Issues":</u>

- **The authors' emphasis on "the biology of the brain" as a foundation for ITI prompted me to wonder about several things, including:**
  - **whether only certain aspects of neuropsychology may have been considered**
  - **whether the hierarchical nature of the nervous system structure and function were incorporated in ITI**
  - **whether adequate attention had been given to the fact that some "lower level" functions may not be readily or easily controlled by higher level mental processing**
- **This in turn reminded me about an interesting, and still useful, NSSE (National Society for the Study of Education) volume, "Education and the Brain," that was published a number of years ago. It also reminded me that I have had some reservations about the extent to which many facets of "cognitive psychology" may adequately take into account brain-behavior relationships. This triggered the idea that it would be good to see an updated version of the NSSE volume on "Education and the Brain," or on some similar title.**
- **It also raised questions for me about prospects for re-examining some earlier theories – such as the ideas of Montessori – from our past that might be better understood in the context of our contemporary and emerging instructional theories.**

Presentation #2, Session #3

- **Chapter 7 Michael Hannafin, Susan Land, & Kevin Oliver, Open Learning Environments: Foundations, Methods, and Models**

<u>"Ideas":</u>

- These authors venture into the challenging topic of "open learning environments."
- p. 1: They remind readers: "Interest in student-centered learning and learner-centered design has grown dramatically."
- They also define their topic by noting: p. 1: "Open-endedness refers to either the learning goal(s), the means through which learning goals are pursued, or both learning goals and means."
- A number of relevant concepts, components and methods are described, along with numerous examples and illustrations.

"Issues":

- Some of the major questions that many readers may have will, IMHO, include queries as to (a) how teachers can be "prepared" to address such open-ended possibilities, and (b) what kinds of in-serve preparation plus classroom-based resources (human and others) may be required or at least desirable to implement such an approach.
- Given the details provided by the authors, it seems plausible that researchers may want to examine a number of topics. However, the open-ended character of this approach also may pose problems for delineating both the kinds of research questions that need to be addressed and, possibly also quite troubling, the manner in which such research questions can be addressed.
- Although the authors did not explicitly state this (so far as I've noticed), it seems reasonable to predict that this emphasis is quite likely to increase even more with wider use of the Internet and a host of other technology-based resources.
- These same resources may quite often result in teachers venturing into areas where students may have greater familiarity than teachers do. ... into an environment where "teacher does not always know the answers."

Presentation #3, Session #3

Chapter 16 Lev N. Landa, Landamatics Instructional Design Theory and Methodology for Teaching General Methods of Thinking

"Ideas":

- p. 1: Landamatics "is a general method (or methodology) of approaching the design of any effective course of instruction or any lesson plan, whether the task is to teach knowledge of certain phenomena, or a process of visual analysis of an object or a strategy of thinking or anything else. The method formulates general, but at the same time sufficiently detailed, procedures – algorithmic or nonalgorithmic – which can be applied to designing and teaching any specific knowledge and any cognitive process."
- Landamatics methods and examples emphasize the need for careful analysis of mental operations -- particularly the mental operations of people who are expert in addressing problems being addressed, identify key steps in mental operations, and teach novices how to function cognitively like experts.

"Issues":

Some of the questions that are prompted by this theory but which also are relevant when we examine other cognitive instructional theories and models.

- **To what extent are such general models of thinking not more commonly taught in schools? Before we instructional theory enthusiasts go too far, we should consider whether there may be some good reasons, not only 'bad reasons,' why they are not more commonly taught.**
- **This paper (along with all of the others which focus on cognitive operations) illustrates the point that I made earlier in another session, namely – that psychology may have regained its "mind" after allegedly having lost it early in this century. But should we merely displace other approaches and only focus on cognitive theories and models, or should we try to understand how and where and why a combination of theories and approaches may be needed – for theoretical development as well as for practical applications?**
- **This leads to another related matter: Are there some instances in which such cognitive strategies should be emphasized in education and training, and other instances in which some other approach to instruction may be as good or better?**
- **How can practitioners and researchers appropriately and usefully integrate ideas from contrasting theories?**
- **To what extent and in what ways should we be attempting to help students to become more aware of the utility of their current and emergent cognitive operations?**

Presentation #4, Session #3

Chapter 22 Catherine Lewis, Marilyn Watson, & Eric Schaps, Recapturing Education's Full Mission: Educating for Social, Ethical, *and* Intellectual Development

"Ideas":

- **It was my impression that a key idea from this paper is that we need to consider affective education as an integral part of (at least) K-12 education.**
- **This paper reminds me of a "ditty" I learned during graduate school. Although I no longer recall the author(s) nor the details, it essentially suggested that psychology had lost its soul, as well as its mind, at the beginning of the 20th century. This paper illustrates way in which ethical as well as intellectual and social matters may warrant re-examination in schools. But along with that idea are some complex problems and various social-political issues.**
- **Apparently a major theme, from their perspective, is to create an environment that will foster a "caring community of learners." Moreover, they seem to expect that this kind of community will foster social, ethical and intellectual development.**
- **More explicitly related to education and training is a view that seems to be evident in this paper, namely that the authors' ideas need to be integrated with the other issues and approaches we are trying to address in conjunction with instruction.**

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"Issues":

- I've already alluded to the complex issues with which we almost inevitably become involved as we move away from more narrowly focused "academic learning."
- I should also add here that the authors of this paper apparently are aware of these issues, given their comments in concluding sections of their paper. They note that the approach on which they have embarked is somewhat counter to the increasingly narrow focus that some educators and some people in society seem to prefer.
- They also are aware that the ideas they are proposing could "complicate" the life of our already-too-busy teachers.
- This approach also presents additional problems and challenges for theorists and for researchers because of the considerably more complex processes and outcomes that are involved.

Here are a few potentially useful "concluding comments":

- In today's "fast moving society" with reliance on "fast foods," obligations for institutional administrators to show "positive" quarterly returns, managed health care that focuses more on the bottom line than on quality health care, and a potentially troubling similarity emerging in K-12 and higher education, "contemplating theories" seems like a luxury that society may not be able to afford.
- It seems somewhat ironic, but could it be that technology – which some view as dehumanizing and anti-theory – might serve as an influence that moves society in the direction of thinking about people and thinking about ideas that may underlie or support interventions in education and training?
- There are some signs of recognition that "technology" (broadly and variably defined) may serve as a catalyst to thinking more carefully about "how" and "why" we deploy technology resources to facilitate learning.
- Along with growing recognition that technology resources may be helpful in addressing educational and other societal responsibilities and problems may also be a catalyst to "investing" more time and effort to identify when and how we may use technology constructively.
- If my assessment of emergent trends turns out to be accurate, this could represent not only an opportunity but also an obligation for all of involved with instructional theories.
- There is some indication that decision makers are moving away from merely "having" computers and other technology resources toward having assistance in identifying ways that these resources can enhance curriculum and instruction. This trend can offer opportunities to apply instructional theories but also will involve obligations to improve the instructional theories that we have now and that we'll develop in the future so that they will both help us to understand instruction and learning and also will be genuinely useful in practical contexts.